

Notice of Allowability	Application N .	Applicant(s)
	09/559,206	WONG, DANIEL MANHUNG
	Examiner Baoquoc N. To	Art Unit 2162

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 05/24/2006.
2. The allowed claim(s) is/are 1, 3, 7-9, 11-12, 15-17, 19-20, 23-26, 28-29, 31-32 and 34.
3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

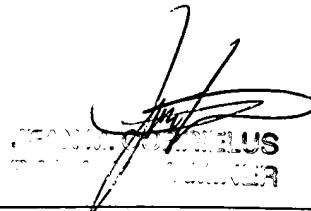
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date 05/24/2006.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.



MANHUNG
DANIEL
WONG

1

DETAILED ACTION

2 1. Claims 1, 3, 5, 7-9, 11-13, 15-17, 19-21, 23-26, 28-29, 31-32 and
3 34 are pending in this application.

4

5 **EXAMINER'S AMENDMENT**

6 2. An examiner's amendment to the record appears below. Should the
7 changes and/or additions be unacceptable to applicant, an amendment
8 may be filed as provided by 37 CFR 1.312. To ensure consideration of
9 such an amendment, it MUST be submitted no later than the payment of
10 the issue fee.

11 Authorization for this examiner's amendment was given in a
12 telephone interview with Edward J. Grundler, Reg. No. 47,615 on May
13 24th, 2006.

14 Please amend the application as follows:

15 1. (Currently amended) A computer-implemented method for
16 selectively auditing accesses to a relational database, comprising:

17 receiving a query for the relational database;

18 selectively auditing an access to the relational database,

19 wherein selectively auditing the access involves

20 automatically modifying the query prior to processing the

21 query,

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22 wherein processing the query causes an audit record

23 to be created and recorded only for rows in relational tables

24 accessed by the query and that satisfy an auditing condition,

25 wherein the auditing condition specifies a condition based on

26 a value of a field in a row in the relational database, and

27 wherein satisfying the auditing condition allows

28 selective auditing of the query,

29 processing the modified query to produce a query result, wherein

30 processing the modified query includes:

31 creating the auditing records only for rows in relational

32 tables accessed by the query and that satisfy the auditing

33 condition, and

34 recording the audit record in an audit record store;

35 and

36 returning the query result;

37 wherein if the query modifies at least one entry in the relational

38 database, using a relational database system trigger to create and record

39 the audit record for the modification to the relational database.

40

41 2 (Canceled).

42

43 3. (Previously presented) The method of claim 1, further comprising
44 ensuring the case statement is evaluated near the end of the query
45 processing so the case statement is evaluated only after other conditions
46 of the query are satisfied.

47

48 4-6 (Canceled).

49

50 7. (Original) The method of claim 1, wherein the audit record
51 includes:

52 a user name for a user making the query;
53 a time stamp specifying a time of the query; and
54 a text of the query.

55

56 8. (Original) The method of claim 1, wherein the auditing condition
57 includes a condition for a field within the relational database.

58

59 9. (Currently amended) A computer-readable storage medium
60 storing instructions to be executed by a computer causing the computer to
61 perform a method for selectively auditing accesses to a relational
62 database, the method comprising:

63 receiving a query for the relational database;

64 selectively auditing an access to the relational database,
65 wherein selectively auditing the access involves
66 automatically modifying the query prior to processing the
67 query,
68 wherein processing the query causes an audit record
69 to be created and recorded only for rows in relational tables
70 accessed by the query and that satisfy an auditing condition,
71 wherein the auditing condition specifies a condition
72 based on a value of a field in a row in the relational
73 database, and
74 wherein satisfying the auditing condition allows
75 selective auditing of the query,
76 processing the modified query to produce a query result, wherein
77 processing the modified query includes:
78 creating the auditing records only for rows in relational
79 tables accessed by the query and that satisfy the auditing
80 condition, and
81 recording the audit record in an audit record store;
82 and
83 returning the query result;

84 wherein if the query modifies at least one entry in the relational
85 database, the method further comprises using a relational database
86 system trigger to create and record the audit record for the modification to
87 the relational database.

88

89 10 (Canceled).

90

91 11. (Previously presented) The computer-readable storage medium
92 of claim 9, wherein the method further comprises ensuring the case
93 statement is evaluated near the end of the query processing so the case
94 statement is evaluated only after other conditions of the query are
95 satisfied.

96

97 12. (Original) The computer-readable storage medium of claim 9,
98 wherein the method further comprises retrieving the auditing condition for
99 a given table from a data structure associated with the given table.

100

101 13-14 (Canceled).

102

103 15. (Original) The computer-readable storage medium of claim 9,
104 wherein the audit record includes:

105 a user name for a user making the query;
106 a time stamp specifying a time of the query; and
107 a text of the query.

108

109 16. (Original) The computer-readable storage medium of claim 9,
110 wherein the auditing condition includes a condition for a field within the
111 relational database.

112

113 17. (Currently amended) An apparatus for selectively auditing

114 accesses to a relational database, comprising:

115 a receiving mechanism configured to receive a query for the
116 relational database;

117 a selective auditing mechanism configured to selectively audit an
118 access to the relational database,

119 wherein selectively auditing the access involves

120 automatically modifying the query prior to processing the
121 query,

122 ~~wherein processing the query causes an audit record~~
123 ~~to be created and recorded only for rows in relational tables~~
124 ~~accessed by the query and satisfying an auditing condition,~~

125 wherein the auditing condition specifies a condition

126 based on a value of a field in a row in the relational
127 database, and
128 wherein satisfying the auditing condition allows
129 selective auditing of the query,
130 a query processor configured to process the modified query to
131 produce a query result, wherein processing the modified query includes:
132 creating the auditing records only for rows in relational
133 tables accessed by the query and that satisfy the auditing
134 condition, and
135 recording the audit record in an audit record store;
136 and
137 a returning mechanism configured to return the query result;
138 wherein if the query modifies at least one entry in the relational
139 database, the apparatus uses a relational database system trigger to
140 create and record the audit record for the modification to the relational
141 database.
142
143 18 (Canceled).
144
145 19. (Previously presented) The apparatus of claim 17, wherein the
146 query modification mechanism is configured to ensure the case statement

147 is evaluated near the end of the query processing so the case statement is
148 evaluated only after other conditions of the query are satisfied.

149

150

151 20. (Original) The apparatus of claim 17, wherein the query
152 modification mechanism is configured to retrieve the auditing condition for
153 a given table from a data structure associated with the given table.

154

155 21-22 (Canceled).

156

157 23. (Original) The apparatus of claim 17, wherein the audit record
158 includes:

159 a user name for a user making the query;
160 a time stamp specifying a time of the query; and
161 a text of the query.

162

163 24. (Original) The apparatus of claim 17, wherein the auditing
164 condition includes a condition for a field within the relational database.

165

166 25. (Previously presented) The method of claim 1, further
167 comprising retrieving the auditing condition for a given table from a data
168 structure associated with the given table.

169

170 26. (Currently amended) A computer-implemented method for
171 selectively auditing accesses to a relational database, comprising:
172 receiving a database operation for the relational database;
173 selectively auditing an access to the relational database based on
174 an auditing condition, wherein the auditing condition specifies a condition
175 based on a value of a field in a row in the relational database;
176 processing the database operation to produce a database
177 operation result, wherein processing the database operation includes:
178 creating the auditing records only for selected rows in
179 the relational database that are accessed by the database
180 operation and that satisfy the auditing condition, and
181 recording the audit record in an audit record store;
182 and
183 returning the database operation result;
184 wherein selectively auditing the access involves automatically
185 modifying the database operation prior to processing the database
186 operation,

187 wherein satisfying the auditing condition allows selective auditing of
188 the database operation and not for other rows;

189 wherein satisfying the auditing condition allows selective auditing of
190 the database operation; and

191 wherein if the database operation modifies at least one entry in the
192 relational database, using a relational database system trigger to create
193 and record the audit record for the modification to the relational database.

194

195 27 (Canceled).

196

197 28. (Previously presented) The method of claim 26, wherein the
198 auditing condition includes a condition for at least two fields within the
199 relational database.

200

201 29. (Currently amended) A computer-readable storage medium
202 storing instructions that when executed by a computer cause the computer
203 to perform a method for selectively auditing accesses to a relational
204 database, the method comprising:
205 receiving a database operation for the relational database;

206 selectively auditing an access to the relational database based on
207 an auditing condition, wherein the auditing condition specifies a condition
208 based on a value of a field in a row in the relational database;
209 processing the database operation to produce a database
210 operation result, wherein processing the database operation includes:
211 creating the auditing records only for selected rows in
212 the relational database that are accessed by the database
213 operation and that satisfy the auditing condition, and
214 recording the audit record in an audit record store;
215 and
216 returning the database operation result;
217 wherein selectively auditing the access involves automatically
218 modifying the database operation prior to processing the database
219 operation,
220 wherein satisfying the auditing condition allows selective auditing of
221 the database operation and not for other rows;
222 wherein satisfying the auditing condition allows selective auditing of
223 the database operation; and
224 wherein if the database operation modifies at least one entry in the
225 relational database, using a relational database system trigger to create
226 and record the audit record for the modification to the relational database.

227

228 30 (Canceled).

229

230 31. (Previously presented) The computer-readable storage
231 medium of claim 29, wherein the auditing condition includes a condition for
232 at least two fields within the relational database.

233

234 32. (Currently amended) An apparatus for selectively auditing
235 accesses to a relational database, comprising:

236 a receiving mechanism configured to receive a database operation
237 for the relational database;

238 a selective auditing mechanism configured to selectively audit an
239 access to the relational database based on an auditing condition, wherein
240 the auditing condition specifies a condition based on a value of a field in a
241 row in the relational database;

242 a processing mechanism configured to process the database
243 operation to produce a database operation result;

244 a creating mechanism configured to create the auditing records
245 only for selected rows in the relational database that are accessed by the
246 database operation and that satisfy the auditing condition, and

247 a recording mechanism configured to record the audit record in an

248 audit record store; and

249 a returning mechanism configured to return the database operation

250 result;

251 wherein selectively auditing the access involves automatically

252 modifying the database operation prior to processing the database

253 operation,

254 wherein satisfying the auditing condition allows selective auditing of

255 the database operation and not for other rows;

256 wherein satisfying the auditing condition allows selective auditing of

257 the database operation; and

258 wherein if the database operation modifies at least one entry in the

259 relational database, the apparatus uses a relational database system

260 trigger to create and record the audit record for the modification to the

261 relational database.

262

263 33 (Canceled).

264

265 34. (Previously presented) The apparatus of claim 32, wherein the

266 auditing condition includes a condition for at least two fields within the

267 relational database.

268

269

Allowable Subject Matter

270 3. Claims 1, 3, 7-9, 11-12, 15-17, 19-20, 23-26, 28-29, 31-32 and 34

271 are allowed over prior art made of record.

272 The following is an examiner's statement of reasons for allowance:

273 As to claim 1, none of the prior art alone or in combination either

274 teach or suggests "selectively auditing an access to the relational

275 database, wherein selectively auditing the access involves automatically

276 modifying the query prior to processing the query, wherein the auditing

277 condition specifies a condition based on a value of a field in a row in the

278 relational database, and wherein satisfying the auditing condition allows

279 selective auditing of the query, processing the modified query to produce

280 a query result, wherein processing the modified query includes: creating

281 the auditing records only for rows in relational tables accessed by the

282 query and that satisfy the auditing condition, and recording the audit

283 record in an audit record store; and returning the query result; wherein if

284 the query modifies at least one entry in the relational database, using a

285 relational database system trigger to create and record the audit record

286 for the modification to the relational database" with "receiving a query for

287 the relational database."

288 Claims 3, 7-8 and 25 are depended on claim 1; therefore, claims 3

289 and 7-8 are allowed under the same reason.

290 Claim 9 is a computer-readable storage medium storing instructions
291 to be executed by a computer to perform the method as discloses in
292 claim 1; therefore, claim 9 is allowed under the same reason as to claim
293 1.

294 Claims 11-12 and 15 are depended on claim 9; therefore, claims
295 11-12 and 15 are allowed under the same reason as to claim 9.

296 Claim 17 is an apparatus for performing the method in claim 1;
297 therefore, claim 17 is allowed under the same reason as to claim 1.

298 Claims 19-20 and 23-24 are depended on claim 17; therefore,
299 claims 19-20 and 23-24 are allowed under the same reason as to claim
300 17.

301 Claim 26 is a method for performing the steps similar to claim 1;
302 therefore, claim 26 is allowed under the same reason as to claim 1.

303 Claim 28 is depended on claim 26; therefore, claim 27 is allowed
304 under the same reason as to claim 26.

305 Claim 29 is a computer-readable storage medium storing
306 instructions when execute perform the method or claim 26; claim 28 is
307 allowed under the same reason as well.

308 Claim 31 is depended on claim 29; therefore, claim 31 is allowed
309 under the same reason as to claim 31.

310 Claim 32 is an apparatus for perform the method of claim 26;

311 therefore, claim 32 is allowed under the same reason as claim 26.

312 Claim 34 is depended on claim 32; therefore, claim 34 is allowed
313 under the same reason as to claim 32.

314 Any comments considered necessary by applicant must be
315 submitted no later than the payment of the issue fee and, to avoid
316 processing delays, should preferably accompany the issue fee. Such
317 submissions should be clearly labeled "Comments on Statement of
318 Reasons for Allowance."

319

320 ***Conclusion***

321 4. The prior art made of record and not relied upon is considered
322 pertinent to applicant's disclosure.

323 Patent:

324 Morrison et al. (US. Patent No. 6,382,357 B1) Patent date: 05/07/2002.

325 Williams (US. Patent No. 5,600,554) Patent date: 04/04/1997.

326 Asad et al. (US. Patent No. 6,725,240 B1) Patent date: 04/20/2004.

327 Adams et al. (US. Patent No. 6,931,573 B2) Patent date: 08/16/2005.

328 NPL:

329 Bhargava et al. Relational database system with zero information
330 loss, (knowledge and data engineering), IEEE Transaction, 1993, pages
331 76-87.

332

333

334 ***Contact Information***

335 5. Any inquiry concerning this communication or earlier
336 communications from the examiner should be directed to Baoquoc N. To
337 whose telephone number is at 571-272-4041 or via e-mail
338 BaoquocN.To@uspto.gov. The examiner can normally be reached on
339 Monday-Friday: 8:00 AM – 4:30 PM, EST.

340 If attempts to reach the examiner by telephone are unsuccessful,
341 the examiner's supervisor, John Breene can be reached at 571-272-4107.

342 Any inquiry of a general nature or relating to the status of this
343 application or proceeding should be directed to the receptionist whose
344 telephone number is (703) 305-3900.

345 Any response to this action should be mailed to:

346 Commissioner of Patents and Trademarks
347 Washington, D.C. 20231.

348 The fax numbers for the organization where this application or
349 proceeding is assigned are as follow:

350 (571) –273-8300 [Official Communication]

351 BQ To

352 May 25th, 2006


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